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Derwent Title: **Prod'n. of and partially reinforced cast aluminium alloy component - comprises a reinforcing element formed of a spray-compacted aluminium alloy and inserted into the casting mould for the component**

Original Title: EP0640759A1: Partially reinforced aluminium cast construction part and method of manufacturing same

Assignee: PEAK WERKSTOFF GMBH Non-standard company

Inventor: HUMMERT K; SCHATTEVOY R;

Accession/Update: 1995-092386 / 199722

IPC Code: B22D 19/02 ; F02F 3/00 ; B22D 15/02 ; B22D 19/00 ; B22D 19/14 ; C23C 4/12 ; F02F 3/12 ;

Derwent Classes: M22; P53; Q52;

Manual Codes: M22-G03K(Making specific cast products)

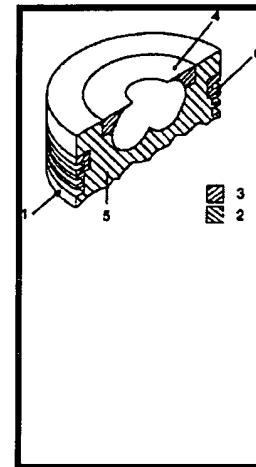
Derwent Abstract: ([EP0640759A](#)) The component (1) consists of an aluminium alloy casting (2) and a reinforcing element (3) which is at least partially surrounded by the basic material of the casting (2). The reinforcing element (3) consists of a spray-compacted aluminium alloy which (within the joint regions) forms an integral, firm material bond with the casting (2).

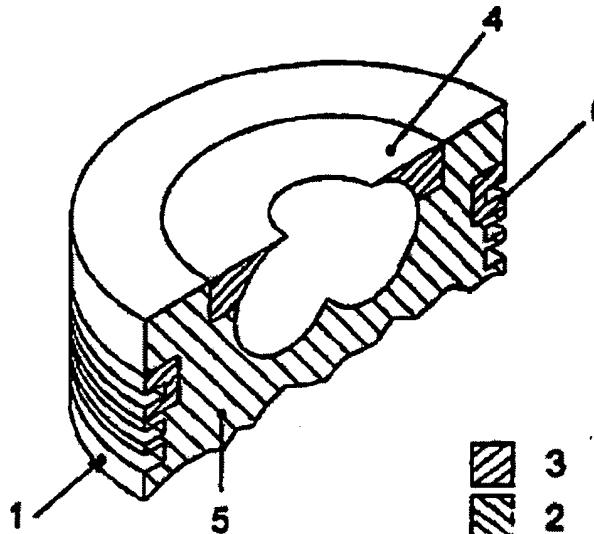
The method for producing the component (1) includes: (a) forming of a spray-compacted reinforcing element (3) which defines at least a part of the finished component (1); (b) insertion of the element (3) into a casting mould for the component; and (c) filling the remaining mould space with aluminium alloy melt.

Use - In motor manufacturing industries.

Advantage - Partially reinforced cast aluminium alloy castings, with an integral bond between the cast and reinforcing materials, are producable in a cost-effectively manner. **CLAIMED METHOD** - The reinforcing element (3) is produced as an extruded section. Alternatively, it is produced as a forging. Such an element is preheated in the mould. The mould is filled with aluminium alloy melt at a velocity which is sufficient for washing away the oxide layers that have formed on the surface of the reinforcing element. The washing-away process is controlled by the choice of the pouring locations and/or by stirring and/or by creation of eddy currents by means of induction coils.

Images:

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Dwg.1/5, Dwg.4a/5, Dwg.4a/5

Family: PDF Patent Pub. Date Derwent Update Pages Language IPC Code

EP0640759A1 * 1995-03-01 199513 11 German F02F 3/00

Des. States: (R) AT ES FR GB IT NL SE

Local appls.: EP1994000112615 Filed:1994-08-12 (94EP-0112615)

ES2098085T3 = 1997-04-16 199722 Spanish F02F 3/00

Local appls.: Based on EP00640759 (EP 640759)

EP1994000112615 Filed:1994-08-12 (94EP-0112615)

EP0640759B1 = 1997-03-05 199714 11 German F02F 3/00

Des. States: (R) AT ES FR GB IT NL SE

Local appls.: EP1994000112615 Filed:1994-08-12 (94EP-0112615)

DE4328619C2 = 1995-08-10 199536 9 German B22D 19/02

Local appls.: DE1993004328619 Filed:1993-08-26 (93DE-4328619)

DE4328619A1 = 1995-03-02 199514 9 German B22D 19/02

Local appls.: DE1993004328619 Filed:1993-08-26 (93DE-4328619)

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Legal Status:

First Claim: 1. Bauteil (1) bestehend aus einem Al-Gußteil (2) und einem von dessen Grundwerkst zum mindest partiell durch Eingießen umschlossenen Verstärkungsteil (3), das aus einem sprühkomprimierten Al-Werkstoff besteht und in den Fügezonen mit dem Al-Gußteil (2) e vollständigen festen Materialverbund eingeht.

Priority Number:

Application Number	Filed	Original Title
DE1993004328619	1993-08-26	Partiell verstärktes Al-Gußbauteil und Verfahren zu dessen Herstellung

Citations:

PDF	Patent	Original Title
	DE3518058	KOLBEN FUER VERBRENNUNGSMOTOREN

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<input checked="" type="checkbox"/>	DE4010474	LEICHTMETALLKOLBEN
<input checked="" type="checkbox"/>	EP0262869	PARTICULATE AL ALLOY COMPOSITES
<input checked="" type="checkbox"/>	JP56166368	SLIDING MEMBER
<input checked="" type="checkbox"/>	JP59231163	NAINENKIKANNOSHIRINDAHETSUDO
		Msg: 02Jnl.Ref
		Msg: 2.Jnl.Ref

⑧ Title Terms: PRODUCE REINFORCED CAST ALUMINIUM ALLOY COMPONENT COMPRIZE
REINFORCED ELEMENT FORMING SPRAY COMPACT ALUMINIUM ALLOY
INSERT CAST MOULD COMPONENT

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